



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/755,835	01/12/2004	Peter Daniel Birk	AUS920030095US1	9841
40412	7590	03/07/2007	EXAMINER	
IBM CORPORATION- AUSTIN (JVL) C/O VAN LEEUWEN & VAN LEEUWEN PO BOX 90609 AUSTIN, TX 78709-0609			ALMEIDA, DEVIN E	
			ART UNIT	PAPER NUMBER
			2132	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	03/07/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/755,835	BIRK ET AL.	
	Examiner Devin Almeida	Art Unit 2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 12 January 2004.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-30 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-30 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 1/12/2004.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

This action is in response to the papers filed 1/12/2004. Claims 1-30 were received for consideration. No preliminary amendments for the claims were filed. Currently claims 1-30 are under consideration.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 1-12/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-30 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The "computer operable media" may be "downloaded via the Internet or other computer network" according to the specification page 28 lines 23-24. This subject matter is not limited to a process, machine, manufacture, or a composition of matter. Instead, it includes a form of energy. Energy does not fall within a statutory category since it is clearly not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or

more substances to constitute a composition of matter. Note amending claim 10 to recite to be a "computer storage medium" instead of a "computer readable medium" would overcome this rejection.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9, 19 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 9, 19 and 29 recites the limitation "the third computer". There is insufficient antecedent basis for this limitation in the claim.

Claim 9, 19 and 29 also are indefinite because if the third computer system does not have access to the authentication data how is it retrieving the authentication data from an authentication server and storing the authentication data on a cache associated with the third computer.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-14, 16-24, and 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Giles et al. (U.S. Patent # 6,986,047). Giles teaches with respect to claim 1 and 21, a method of handling client state information, said method comprising: receiving, at a first computer system (see figure 3 element 310 origin web server), a first request from a second computer system (see figure 3 element 305 Client), wherein the first request is received over a computer network (see column 3 lines 36-51 and column 7 lines 10-62 i.e. a client sends a HTTP request); identifying access control data pertaining to the second computer system (see figure 11 column 7 lines 10-62 i.e. the origin web-server creates a valid cookie); creating an encrypted value based upon the access control data (see column 8 lines 52-66); and storing, on the second computer system, a state management data (see column 9 lines 11-12 i.e. the client cookie may be present in the HTTP request by the client) structure that includes an access control identifier (see column 8 line 66 – column 9 line 8) and the encrypted value (see column 8 lines 52-66).

With respect to 2, 12 and 22, authenticating a user of the second computer system (see column 7 lines 10-62 i.e. user ID and password prompt); and caching, on the first computer system, security attributes of the authenticated user that are too sensitive to be included in the state management data structure, wherein the cached security attributes are indexed by the encrypted value and wherein cached security attributes are adapted to re-establish a security context of the authenticated user (column 8 line 52 – column 9 line 8 i.e. the key kc shared by the semi-trusted web-server and the origin web-server).

With respect to 3, 13 and 23, wherein the access control identifier is selected from the group consisting of the access control data (see column 8 line 52 – column 9 line 8 i.e. the access control identifier is the encrypted part of the access control data (cookie)) and a unique identifier used by the first computer system to map to the access control data stored on an authentication server (column 9 line 9 – column 9 line 55 i.e. the cookie is decrypted by using the domain identifier and the key identifier to select an appropriate decryption key).

With respect to 4, 14 and 24, wherein at least one field included in the access control data is selected from the group consisting of: a domain, a maximum age, a path, a port, an authentication strength value, an authenticating server identifier, and an access control privilege identifier (column 8 line 52 – column 9 line 8 i.e. a global time out value valid for the whole domain (1130) which is usually a fixed offset added to the creation time; and a cookie inactivity time-out (1135) which is a fixed offset added to the cookie creation time; and the domain name of the origin web-server).

With respect to 6, 16 and 26, storing the encrypted value at the first computer system in response to receiving the first request (see column 7 line 10-62 i.e. at step 800 a client sends an HTTP request and after step 820 the origin web-server creates a cookie according to figure 11 and column 8 line 52 – column 9 line 8 this cookie is digital signed and encrypted with key kc); receiving a second request from the second computer system; retrieving the state management data structure from the second computer system, the retrieving performed in conjunction with the reception of the second request; and comparing the encrypted value included in the retrieved state

management data structure with the encrypted value stored at the first computer system (column 9 line 9 – column 9 line 55).

With respect to 7, 17 and 27, re-establishing an authenticated user's security context by using the encrypted value as a key to retrieve the access control data cached on the first computer system (column 8 line 52 – column 9 line 55).

With respect to 8, 9, 18, 19, 28 and 29, authenticating a user of the second computer system, wherein the identifying, creating, and storing are performed in response to successfully authenticating the user (column 7 line 10-62).

With respect to 10, 20 and 30, receiving, at the first computer system, a second request from the second computer system; retrieving the state management data structure from the second computer system, the retrieving performed in conjunction with the reception of the second request (column 9 line 9–55 i.e. process of validating a client cookie and returning client credentials in case the cookie is valid as part of the correlation procedures. The client cookie may be present in the HTTP request by the client); determining that the retrieved state management data structure is stale based on a timestamp included in the state management data structure (see column 9 line 11-55 i.e. at step 1210 the global time-out and inactivity time-out fields are checked); and authenticating a user of the second computer system in response to the determination (see column 9 line 11 – column 10 line 31).

With respect to claim 11, a first information handling system comprising: one or more processors; a memory accessible by the processors (see column 3 lines 36-51 i.e. it is inherent that a computer has a processor and a memory); a network interface

connecting the information handling system to a computer network (see column 3 lines 36-51); a tool for handling client state information, the tool including software effective to (see column 4 lines 21-41); receiving, at a first computer system (see figure 3 element 310 origin web server), a first request from a second computer system (see figure 3 element 305 Client), wherein the first request is received over a computer network (see column 3 lines 36-51 and column 7 lines 10-62 i.e. a client sends a HTTP request); identifying access control data pertaining to the second computer system (see column 7 lines 10-62 and column 8 line 52 – column 9); creating an encrypted value based upon the access control data (see column 8 line 52 – column 9 line 55 i.e. key kc); and storing, on the second computer system, a state management data (i.e. cookie) structure that includes an access control identifier and the encrypted value (see column 7 lines 10-62 and column 8 line 52 – column 9 line 55 i.e. the client cookie may be present in the HTTP request by the client).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 5, 15, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giles et al. (U.S. Patent # 6,986,047) in view of Schneier " Applied Cryptography: Protocols, Algorithms, and Source Code in C". Giles teaches everything with respect to

claim 1 above but with respect to claim 5 teaches digital signing the access control date (i.e. cookie) and encrypting the hash value (see column 8 line 52 – column 9 line 55 i.e. the fields of the first part are encrypted using the key Kc). Giles do not explicitly teach hashing the access control data using a hashing algorithm. Schneier teaches that digital signatures protocols are often implemented with one-way hash functions (Schneier page 38). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have use a digital signature protocols that used a one-way hash functions to save time. Therefore one would have be motivated to have used a use a digital signature protocols that used a one-way hash functions to authenticate save and provide message integrity (Schneier page 38).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devin Almeida whose telephone number is 571-270-1018. The examiner can normally be reached on Monday-Thursday from 7:30 A.M. to 5:00 P.M. The examiner can also be reached on alternate Fridays from 7:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron, can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Devin Almeida  
Patent Examiner  
2/27/2007



Devin Almeida  
Patent Examiner  
2/27/2007